Don't Wait Until 1998

State of New Jersey
Christine Todd Whitman
Governor

New Jersey Department of Environmental Protection
Robert C. Shinn, Jr.
Commissioner

January 1995

MAIL REQUESTS FOR COPIES TO:
New Jersey Department of Environmental Protection
Site Remediation Program
UST Brochure Request-Don't Wait Until 1998
CN 028
Trenton, New Jersey 08625

FOR MORE INFORMATION CALL: (609) 633-7141

Dear Citizen:

I am pleased to present to you New Jersey's booklet on upgrading existing underground storage tank systems entitled "Don't Wait Until 1998". This booklet was initially developed by the United States Environmental Protection Agency, and modified to be consistent with the laws and regulations regarding New Jersey's underground storage tank program.

This booklet focuses on how the owners and operators of regulated underground storage tanks can meet the December 22, 1998 deadline for upgrade. By that date, all tanks must have spill protection, overfill protection and corrosion protection as required by federal and state law. The booklet describes these requirements in some detail, but in straightforward language which we hope will be easily understood by most tank owners and operators.

These upgrade requirements only apply to underground storage tanks regulated by state law. Accordingly, any underground tanks which store oil for heating a residence (no matter what size) are not regulated by state law, and therefore are not required to upgrade. If you are not sure if your tank is regulated, you can refer to the chart on page 18, or call (609) 633-7141 for more information.

Finally, this booklet stresses the importance of upgrading as early as possible. Planning should start now in order to insure compliance with the deadline. I hope you find this booklet a useful tool for implementing your tank upgrade. Remember: "Don't wait until 1998".

Sincerely,

Richard Gimello, Assistant Commissioner
Site Remediation Program

MISSION STATEMENT

The Mission of the New Jersey Department of Environmental Protection is to conserve, protect, enhance, restore and manage our environment for present and futute generations. We strive to prevent pollution; ensure the efficient use of safe, environmentally sound and reliable energy resources; provide opportunities for recreation and enjoyment of natural and historic resources; and promote a healthy and sustainable ecosystem.

Guiding Principles

We are guided by these principles in accomplishing our mission:

-To consistently apply and vigorously enforce environmental laws and standards in a fair, timely and predictable manner.

-To be accountable, accessible and helpful to the public.

-To provide clear, prompt and fair guidance and decisions.

-To increase understanding of environmental and energy concerns through effective communication and education.

-To establish regulations and standards consistent with law and public policy and active public dialogue.

-To base our standards, decisions and activities on sound science.

-To promote energy conservation, pollution prevention and consideration of the cumulative impacts of activities in our actions and those of individuals, business and governments throughout the state.

-To maintain a work environment that attracts and retains dedicated, talented people; fully develops and challenges individual abilities; and encourages innovation and teamwork.

-To adhere to the highest standards of personal and professional conduct.

CONTENTS

NOTE: The requirements for underground storage tanks referred to in this booklet can be found in the Code of Federal Regulations (CFR) at 40 CFR, Part 280, in the New Jersey Administrative Code (NJAC) at N.J.A.C. 7:14B-1 et seq. and at P.L. 1994, c.14. Sections of the CFR can be ordered from the U.S. Government Printing Office, Washington, DC 20402 (or call 202 783-3238). Sections of the NJAC can be ordered from the Office of Administrative Law at (609) 588-6606. Copies of P.L. 1994, c.14 may be obtained by calling the New Jersey Legislative Services Bill Room at (609) 292-6395.

DISCLAIMER: Any reference to or depiction of commercial products in this booklet is solely for explanatory purposes and is <u>not</u> intended as an endorsement of these products.

Why Should You Read This Booklet?

This booklet contains information to help you meet requirements for underground storage tank systems (USTs) *installed before December 22, 1988*. We call these older tank systems "*existing USTs*."

Federal rules and state law require you to make sure your existing USTs have the following by December 22, 1998:

- Spill protection
- Overfill protection
- Corrosion protection

Leak detection is also required, but is not addressed in this booklet. For more information, refer to EPA's publication "Straight Talk on Tanks" (ordering information on page 16), or contact DEP at (609) 984-3156.

You must choose one of the following actions for an existing UST:

- Add spill, overfill, and corrosion protection by December 22, 1998
- Close the existing UST by December 22, 1998
- Replace the closed existing UST with a new UST

You should act as soon as possible. Without the protection provided by upgrading or replacing, your UST is more likely to leak, damage the environment, and leave you with costly cleanups. The next page lists several advantages of acting early.

This booklet focuses on how you can meet upgrade requirements. The basic upgrade requirements are listed on page 3. Some information on properly closing an UST appears on page 12. You can find more information on the requirements for new UST systems (those installed after December 22, 1988) in EPA's publication "Musts for USTs" (ordering information on page 16).

This booklet uses "upgrading" and "upgrade" to mean adding spill, overfill, and corrosion protection to existing USTs.

If your existing USTs have not been upgraded or have not been properly closed by the 1998 deadline, you can be cited for violations and fined.

Why Should You Upgrade Or Replace Early?

Start planning your upgrade, closure, or replacement NOW!

■ Early upgrading or replacing prevents leaks that would otherwise occur between now and December 1998. Avoiding leaks benefits the environment and your business. If your UST does not leak, you will not face costly mandatory cleanups or potential criminal suits or civil suits for damage claims.

■ As December 1998 nears, increased customer demand to upgrade, close, or replace USTs may result in higher charges for these services. Also, you may have trouble finding available contractors and supplies needed to meet the deadline.

■ It can take several months to upgrade, close, or replace your system. Bad weather or contractor delays are not unusual. Before work can start, local construction and regulatory permits may be necessary. The sooner you get started, the better the chance you'll meet or beat the 1998 deadline.

■ The State Legislature has extended the upgrade deadline to be consistent with federal law and to allow tank owners and operators to comply with the 1998 deadline. The USEPA has consistently maintained the position that the federal upgrade deadline will not be extended.

■ If you miss the 1998 deadline for any of the reasons noted above, you can be cited for violations and fined. Failure to be in compliance may reduce or eliminate coverage provided by insurance policies just when you may need these financial resources.

■ Your insurance company may offer financial incentives to upgrade or replace earlier than required by law, such as lower deductibles or premiums.

■ If you discover a leak during upgrading or closing and need financial assistance with remediation costs, the Hazardous Discharge Site Remediation Fund (HDSRF) may be able to help. If you make your claim early, you may be able to avoid possible processing delays that may occur as the deadline approaches. (For more information concerning the HDSRF, please call (609) 633-7141.)

Don't let 1998 arrive before you're ready!

2

What Are The Basic Upgrade Requirements For *Existing* USTs?

Spill Protection *(see pages 4—5)*

Existing tanks must have **catchment basins** *to contain spills from delivery hoses.*

Overfill Protection *(see pages 6—7)*

Existing tanks must use ONE of the following:

- Automatic shutoff devices
- Overfill alarms
- Ball float valves (restrictive flow devices)

Corrosion Protection *(see pages 8—11)*

Existing tanks must match ONE of the following:

- Steel tank has corrosion-resistant coating AND cathodic protection (such as an sti-P_3 tank)
- Tank made of noncorrodible material (such as fiberglass)
- Steel tank clad with noncorrodible material (such as an ACT-100 tank) or tank enclosed in noncorrodible material
- Uncoated steel tank has cathodic protection system
- Uncoated steel tank has interior lined with noncorrodible material
- Uncoated steel tank has cathodic protection AND interior lined with noncorrodible material

Existing piping must match ONE of the following:

- Uncoated steel piping has cathodic protection
- Steel piping has a corrosion-resistant coating AND cathodic protection
- Piping made of (or enclosed in) noncorrodible material (such as fiberglass)

1998 Deadline: Existing USTs must be protected from spills, overfills, and corrosion by December 1998.

MOST tanks and piping must already have leak detection. See EPA's "Straight Talk on Tanks" (ordering information on page 16).

When new USTs are installed, they must have leak detection and protection from spills, overfills, and corrosion. See EPA's "Musts for USTs" (ordering information on page 16).

3

How Can You Protect Against Spills?

Many releases at UST sites come from spills. Spills often occur at the fill pipe when the delivery truck's hose is disconnected. Although these spills are usually small, repeated small releases can cause big environmental problems.

You and your fuel deliverer should see "Keeping It Clean," a video that shows how deliveries can be made safely with no spills (ordering information on page 16).

Human error causes most spills. These mistakes can be avoided by following standard tank filling practices. For example, you must make sure there is room in the UST for the delivery, and the delivery driver must watch the delivery at all times. If you and the delivery driver follow standard practices, nearly all spills can be prevented. For this reason, federal and state UST regulations require that you follow standard filling practices **now**.

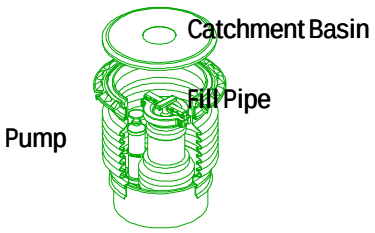
In addition, **USTs must have catchment basins** to contain spills. New USTs must have catchment basins when they are installed.

Federal and state rules require that existing USTs must have catchment basins by December 1998.

What Are Catchment Basins?

Catchment basins are also called "spill containment manholes" or "spill buckets." Basically, a catchment basin is a bucket sealed around the fill pipe (see illustration below).

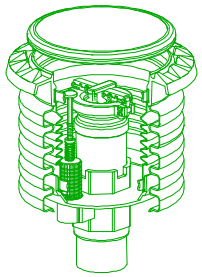
If an UST never receives more than 25 gallons at a time, the UST does not have to meet the spill protection requirements. For example, many small used oil tanks fall in this category.



To protect against spills, the basin should be large enough to contain what may spill when the delivery hose is uncoupled from the fill pipe. Basins range in size from those capable of holding only a few gallons to those that are much larger **the larger the catchment basin, the more spill protection it provides**.

You need a way to remove liquid from catchment basins. Manufacturers equip catchment basins with either pumps or drains to remove liquid. The illustration on the previous page shows a catchment basin with a pump; the illustration below shows a catchment basin with a drain.

Your equipment supplier can help you choose the size and type of catchment basin that meets your needs.



You should try to keep water out of catchment basins. Some catchment basins can collect enough water and sediment, along with spilled product, to make draining this mixture into the tank unwise. If this happens, you may pump out the catchment basin and dispose of the liquid properly. If the liquid contains fuel or chemicals, it could be considered a hazardous waste. Contact the Bureau of Advisement and Manifest at (609) 292-8341 for information on testing and handling requirements.

Having the surrounding surface slope away from the top of catchment basins helps keep water out of them.

How Can You Protect Against Overfills?

If an UST never receives more than 25 gallons at a time, the UST does not have to meet the overfill protection requirements. For example, many small used oil tanks fall in this category.

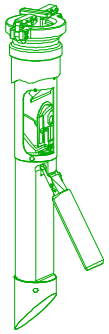
Overfills usually release much larger volumes than spills. When a tank is overfilled, large volumes can be released at the fill pipe and through loose fittings on the top of the tank or a loose vent pipe. The tightness of these fittings normally would not be a problem if the tank were not filled beyond its capacity.

You can solve overfill problems by:

- Making sure there is enough room in the tank for the delivery BEFORE the delivery is made;
- Watching the entire delivery to prevent overfilling or spilling; and
- Using equipment that protects against overfills.

Federal and state rules require that existing USTs must have overfill protection devices by December 1998.

New USTs must have overfill protection devices when they are installed. The three main types of overfill protection devices (automatic shutoff devices, overfill alarms, and ball float valves) are described below and on the next page.



NOTE: If you have "pumped delivery" where fuel is delivered under pressure, you must make sure your overfill protection device works compatibly with pumped deliveries. Also, remember that overfill protection devices are effective only when combined with careful filling practices.

1. What Are Automatic Shutoff Devices?

An automatic shutoff device installed in an UST's fill pipe can slow down and then stop the delivery when the product has reached a certain level in the tank. This device sometimes simply called a "fill pipe device" has one or two valves that are operated by a float mechanism (the illustration on the left shows one kind of automatic shutoff device).

Some automatic shutoff devices work in two stages. The first stage drastically reduces the flow of product to alert the driver that the tank is nearly full. The driver can then close the delivery valve and still have room in the tank for the product left in the delivery hose.

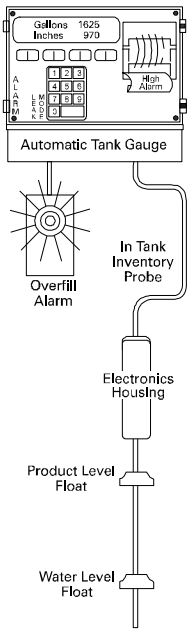
If the driver does not pay attention and the liquid level rises higher, the valve closes completely and no more liquid can be delivered into the tank, leaving the driver with a delivery hose full of product.

To work properly, all overfill devices must be <u>installed carefully</u> at the correct distance below the tank top specified by the manufacturer.

2. What Are <u>Overfill Alarms</u>?

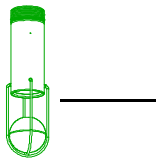
Overfill alarms use probes installed in the tank (see illustration on the right) to activate an alarm when the tank is either 90 percent full or within 1 minute of being overfilled. Either way, the alarm should provide enough time for the driver to close the truck's shutoff valve before an overfill happens. Alarms must be located where the driver can see or hear them easily. (Overfill alarms are often a part of automatic tank gauging systems.)

Overfill alarms work only if they alert the driver at the right time and the driver responds quickly. Remember to put the alarm on an electrical circuit that is active all the time so that the alarm will always work. Many deliveries are made at night when the facility is closed. You don't want to turn off your alarm when you turn off the office lights.



3. What Are <u>Ball Float Valves</u>?

Ball float valves (see illustration on the right) are placed at the bottom of the vent line several inches below the top of the UST. The ball floats on the product and rises with product level during delivery until it restricts vapor flowing out the vent line <u>before</u> the tank is full. If all tank fittings are tight, the ball float valve can create enough back pressure to restrict product flow into the tank which can notify the driver to close the truck's shutoff valve. However, if the UST has loose fittings, sufficient back pressure may not develop and will result in an overfill. *Note: Manufacturers do not recommend using ball float valves with suction piping, pressurized delivery, or coaxial Stage I vapor recovery.*



7

How Can You Protect Against Corrosion?

Federal and state rules require corrosion protection for USTs because unprotected steel USTs corrode and release product through corrosion holes.

You already meet the requirements for corrosion protection if your UST system matches one of the following performance standards for new USTs:

- **Tank and piping completely made of noncorrodible material, such as fiberglass.** Corrosion protection is also provided if tank and piping are completely isolated from contact with the surrounding soil by being **enclosed in** noncorrodible material (sometimes called "jacketed" with noncorrodible material).

Corrosion results when bare metal and soil and moisture conditions combine to produce an underground electric current that destroys hard metal. Over time, corrosion creates holes and leaks develop.

- **Tank and piping made of steel having a corrosion-resistant coating AND having cathodic protection** (such as an sti-P3 tank with appropriate piping). A corrosion-resistant coating electrically isolates the coated metal from the surrounding environment to help protect against corrosion. *Asphaltic coating does not qualify as a corrosion-resistant coating.* Methods of cathodic protection are briefly explained on page 11.

- **Tank made of steel clad with a thick layer of noncorrodible material** (such as an ACT-100 tank clad with fiberglass reinforced plastic). This option does not apply to piping. *Galvanized steel is not a noncorrodible material.*

It is not practical to add coatings or claddings to existing steel USTs that have no corrosion protection. Instead, you must choose **one** of the following **three methods** to add corrosion protection to existing steel tanks:

1. **Add cathodic protection *or***
2. **Add interior lining to tank *or***
3. **Combine cathodic protection and interior lining.**

These methods are described on the following pages.

1. **Add cathodic protection.** If you are adding only cathodic protection, you must do the following:

   - **First, assess tank integrity.** Satisfy ONE of the following methods to make sure that the tank is structurally sound:

     If the tank is LESS THAN 10 YEARS OLD, you can use results from one of the monthly leak detection methods to show the UST is not leaking (groundwater monitoring, vapor monitoring, interstitial monitoring, automatic tank gauging, statistical inventory reconciliation, or other approved methods).

     If the tank is LESS THAN 10 YEARS OLD, you can use results from two tank tightness tests to show the UST is not leaking. The first test takes place before you install cathodic protection, and the second test takes place between 3 and 6 months after installation.

     If the tank is 10 YEARS OLD OR MORE, it must be internally inspected, tested, and assessed to make sure that the tank is structurally sound and free of corrosion holes (see page 15 for industry codes).

   - **Second, install cathodic protection.** Regulations require a certified cathodic protection specialist to design, supervise installation, and inspect cathodic protection systems installed at the UST site. The system must be tested by a certified cathodic protection tester within 6 months of installation and at least every 3 years thereafter. You will need to keep the results of all tests to verify that the cathodic protection is working. In addition, you must inspect an impressed current system every 60 days to verify that the system is operating. Keep results of all of your inspections to prove that the impressed current system is operating properly.

Only tanks proven to be structurally sound can have cathodic protection added to them.

Using cathodic protection requires periodic tests and inspections, as well as consistent recordkeeping (see page 15 for industry codes).

9

Only tanks proven to be structurally sound can be lined.

2. **Add interior lining to the tank.** The interior of a tank can be lined with a thick layer of noncorrodible material (see page 15 for industry codes). Tanks using only an interior lining for corrosion protection must pass an internal reinspection in 10 years and every 5 years after that to make sure that the lining is sound. Keep records of the inspection results.

3. **Combine cathodic protection and interior lining.** You can add both cathodic protection and interior lining. The advantages for you of this combined method are simple: your USTs receive more cathodic protection; and you are not required to have the interior lining periodically inspected (which saves you the cost of these inspections). You will still need to have the cathodic protection system periodically tested and inspected and to keep records (as explained on page 9).

And what about piping?

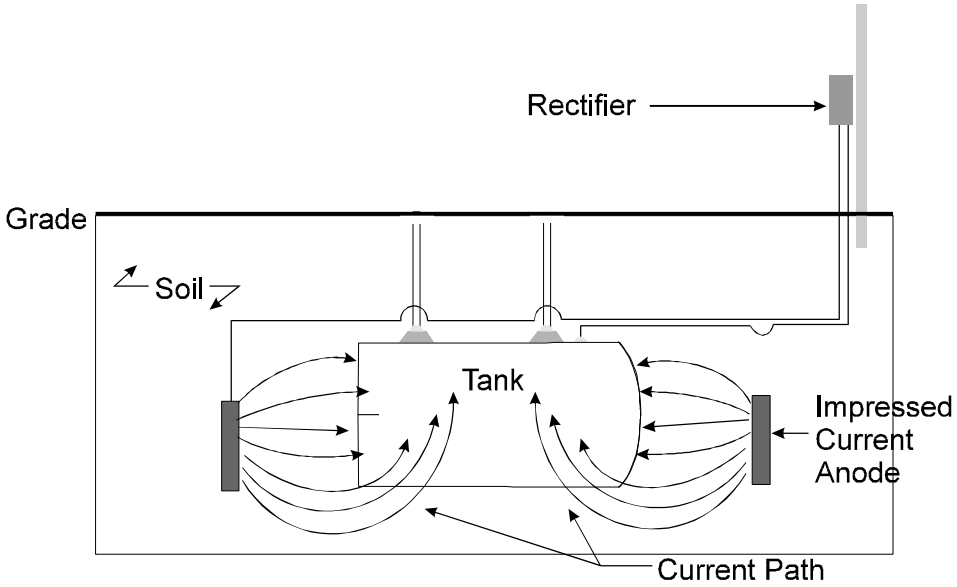
Existing steel piping must have cathodic protection. Note that cathodic protection needs to be tested and inspected periodically and records kept as described on page 9.

Piping entirely made of (or enclosed in) noncorrodible material, such as fiberglass, does not need cathodic protection.

What Are Cathodic Protection Methods?

IMPRESSED CURRENT SYSTEM

An impressed current system uses a rectifier to convert alternating current to direct current (see illustration below). This current is sent through an insulated wire to the "anodes," which are special metal bars buried in the soil near the UST. The current then flows through the soil to the UST system, and returns to the rectifier through an insulated wire attached to the UST. The UST system is protected because the current going to the UST system overcomes the corrosion-causing current normally flowing away from it.



SACRIFICIAL ANODE SYSTEM

Another type of cathodic protection (not illustrated here) is called a sacrificial anode or galvanic system. Although sacrificial anode systems work with new USTs, corrosion protection experts generally agree that ***sacrificial anodes do not work effectively or economically with most existing steel USTs***. Only a certified cathodic protection specialist can determine what kind of cathodic protection will work at your UST site.

For more information on corrosion and how USTs can be protected from it, contact NACE International (formerly the National Association of Corrosion Engineers) or other professionals in this field (see page 15).

What If You Close Or Replace The UST?

If you do not upgrade your existing UST, then you must properly close it. After closing the UST, you may replace it by installing a new UST. Basically, state rules require the following when closing or replacing an UST:

- Submit a Closure Plan Approval Application to the DEP at least 60 days before you take an UST out of service for closure or replacement. (For application forms and information contact the Bureau of Field Operations at (609) 633-7141.) Tanks may not be closed until a Closure Approval from DEP and a demolition permit from your local construction official have been obtained.

- Determine if releases from your UST have contaminated the surrounding environment. You will need to do a site investigation, typically consisting of soil sampling, unless tanks and distribution systems are secondarily contained with approved leak detection and no discharge history. Precision tests may be used in lieu of soil sampling for inaccessible tanks or for original piping with no history of discharge or repair. If you find contamination, you must call DEP's Environmental Action Hot Line at (609) 292-7172 to report the contamination. After making your report, you must arrange to clean up the contamination. To perform a proper cleanup (also called "corrective action"), you must follow the ***Technical Requirements for Site Remediation*** (N.J.A.C. 7:26E). Copies of N.J.A.C. 7:26E can be ordered from the Office of Administrative Law at (609) 588-6606. Within 120 days of reporting the contamination, you must also submit a remedial investigation report to the DEP, describing all activities conducted and results found (see page 16 for ordering EPA's booklet on taking corrective action).

- Have the tank emptied of liquids, dangerous vapor levels, and accumulated sludge. These wastes must be disposed of properly. These potentially very hazardous actions need to be carried out by trained personnel who carefully follow standard safety practices. After the tank has been properly emptied, you can have it removed. All tanks must be removed except when located under a permanent structure or if inaccessible as certified by a New Jersey professional engineer and approved by DEP. If you have obtained DEP approval to leave the UST in the ground, you must fill it with a harmless and chemically inactive solid, such as sand or cement.

WARNING: People are killed or injured every year while closing or removing tanks. Use safe removal practices (see page 15 for a safe closure standard). Only qualified contractors should close or remove USTs.

PARTIAL LIST OF HAZARDOUS SUBSTANCES

HAZARDOUS SUBSTANCE	CASRN*
Acenaphthene	83329
Acenaphthylene	208968
Acetaldehyde	75070
Acetaldehyde, chloro-	107200
Acetaldehyde, tricloro-	75876
Chromic sulfate	10101538
Choromium	7440473
CHROMIUM AND	--
COMPOUNDS	10049055
Chromous chloride	218019
Chrysene	7789437
Cobaltous bromide	544183
Cobaltous formate	14017415
Cobaltous sulfamate	7440508
Copper	544923
Copper cyanide	
Famphur	52857
Ferric ammonium citrate	1185575
Ferric ammonium oxalate	2944674
Ferric chloride	7705080
Ferric dextran	9004664
Ferric fluoride	7783508
Ferric nitrate	10421484
Ferric sulfate	10028225
Keithane	115322
Kepone	143500
Lasiocarpine	303344
LEAD AND COMPOUNDS	--
Lead	7439921
Lead acetate	301042
Lead arsenate	7784409
Lead chloride	7758954
Lead fluoborate	13814965
Lead iodide	10101630
Zinc nitrate	7779886
Zinc phenosulfonate	127882
Zinc phosphide	1314847
Zinc silicoflouride	16871719
Zinc sulfate	7733020
Zirconium nitrate	13746899
Zirconium sulfate	14644612
Zirconium tetrachloride	10026116

* Chemical Abstracts Service Registry Number

What About Hazardous Substance USTs?

Several hundred substances, excluding motor fuel and petroleum products, are designated as "hazardous". These include the hazardous wastes designated pursuant to Section 3001 of the Resource Conservation and Recovery Act of 1976, P.L. 94-580 (42 U.S.C. 6921) and N.J.A.C. 7:26-8; hazardous substances designated pursuant to Section 311 of the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500 (33 U.S.C. 1321), Section 101 (14) of the Comprehensive Environmental Response, Compensation and

12

Liability Act of 1980, P.L. 96-150 (42 U.S.C. 9601) and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq.; and the toxic pollutants designated pursuant to Section 307 of the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500 (33 U.S.C. 1317). A copy of the hazardous substance list can be obtained by contacting the Bureau of Applicability and Compliance at (609) 633-7141.

If your hazardous substance UST was installed before December 22, 1988, you have until December 22, 1998 to add spill, overfill, and corrosion protection (see pages 4-11). Otherwise, you must properly close the UST (see page 12). By this same date, hazardous substance USTs must also have leak detection systems that include **secondary containment with interstitial monitoring**. The leak detection system must be able to detect a leak in the interstitial space within 30 days of occurrence.

Secondary containment is created by placing a barrier inside or outside the tank and piping so that any leaks are contained within the space between the barrier and the tank and piping. **This containment space is called the "interstitial space" and must be monitored for leaks.** Methods that create an interstitial space for existing systems are currently limited in number and not available everywhere.

For more information on hazardous substance USTs, see "Musts for USTs" (ordering information on page 16).

NOTE: ***You may find the "Quick Compliance Checklist" on page 17 to be helpful.***

Permits, Registration and Fees

1. Permitting Requirements

Before you upgrade your UST system, you must first obtain a substantial modification permit from DEP, and a construction permit from your local construction official. If you decide to replace your UST by installing a new UST system, you must first obtain an installation permit from DEP unless the ***entire*** UST system to be installed (tank and piping) is secondarily contained with interstitial monitoring, corrosion protection and spill and overfill protection. Before installing a new UST system you must also obtain a construction permit from your local construction official, whether or not the new UST system is secondarily contained.

Since New Jersey public money is not used to fund the New Jersey UST program, fee collection allows program activities to continue. The authority to collect fees is provided by N.J.S.A. 58:10A-21 et seq. and by N.J.A.C. 7:14B-3.

2. Registration Requirements

If you decide to replace your UST by installing a new UST, you must register your new UST with DEP at least 30 days prior to the use of the UST. The old UST being replaced can be deregistered at the same time.

3. Fees

13

Following is a listing of various activities outlined in this booklet together with the fees associated with these activities. You should submit a separate fee for each activity at a facility which requires a permit or approval at the time the application or report is submitted.

Activity	Fee
1. Permit for the installation or substantial modification of an UST system.	$300.00
2. Review of the closure plan for an UST system.	$300.00
3. Review of the site investigation report of soil sampling following closure.	$500.00
4. Review of the remedial investigation report.	$1,000.00

ORGANIZATIONS TO CONTACT FOR TANK INFORMATION

API (American Petroleum Institute)
1220 L Street, N.W.
Washington, DC 20005
202 682-8000

ASTM (American Society for Testing and Materials)
1916 Race Street
Philadelphia, PA 19103
215 299-5585

Fiberglass Petroleum Tank and
Pipe Institute
9801 Westheimer, Suite 606
Houston, TX 77042-3951
713 465-3310

NACE International (formerly the National Association of Corrosion Engineers)
Box 218340
Houston, TX 77218-8340
713 492-0535

National Fire Protection Association
1 Batterymarch Park
Box 9109
Quincy, MA 02269-9101
617 770-3000

NLPA (National Leak Prevention Association)
Box 1643
Boise, ID 83701
208 389-2074

PEI (Petroleum Equipment Institute)
Box 2380
Tulsa, OK 74101-2380
918 494-9696

STI (Steel Tank Institute)
570 Oakwood Road
Lake Zurich, IL 60047
708 438-8265

INDUSTRY CODES AND STANDARDS

Assessing Tank Integrity and Interior Lining of Tank

API Recommended Practice 1631 (1992), "Interior Lining of Underground Storage Tanks"

NLPA Standard 631 (1991), "Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks"

14

[An ASTM consensus code may be published to standardize alternatives to internal inspections that assess tank integrity.]

Cathodic Protection

API Recommended Practice 1632 (1987), "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"

NACE RP-0169-92 (1992), "Recommended Practice: Control of Corrosion on External Underground or Submerged Metallic Piping Systems"

NACE RP-0285-85 (1985), "Recommended Practice: Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"

STI R892-91 (1991), "Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems"

Closing USTs

API Recommended Practice 1604 (1987), "Removal and Disposal of Used Underground Petroleum Storage Tanks"

General

API Recommended Practice 1615 (1987), "Installation of Underground Petroleum Storage Systems"

PEI RP100-94 (1994), "Recommended Practice for Installation of Underground Liquid Storage Systems"

DEP PUBLICATIONS

"Guidance Document for the Remediation of Contaminated Soils." Order from NJDEP, Site Remediation Program, Bureau of Planning and Systems, CN 413, Trenton NJ 08625-0413 ($5.25 a copy).

- the items below can be obtained by calling (609) 633-7141:

"Revised Soil Cleanup Criteria"

"Site Remediation News"

DEP FORMS & APPLICATIONS

Hazardous Discharge Site Remediation Fund Application Package

UST Upgrade Package (Permit)

UST Closure Approval Application

UST Registration Package

- the above can be obtained by calling (609) 633-7141

EPA PUBLICATIONS

Leak Detection Requirements

"Straight Talk On Tanks: A Summary of Leak Detection Methods for Petroleum Underground Storage Tanks." To order this free publication, call EPA's toll-free RCRA/Superfund Hotline at 800 424-9346 and ask for EPA 530/UST-90/012.

Installing New USTs and General Information

"Musts for USTs: A Summary of the Regulations for Underground Storage Tank Systems." Order from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; order #055-000-00294-1 ($2.50 a copy).

Taking Corrective Action

"Oh No! Petroleum Leaks and Spills: What Do You Do?" To order this free publication, call EPA's toll-free RCRA/Superfund Hotline at 800 424-9346 and ask for EPA 530/UST-88/004.

Tank Filling

"Keeping It Clean: Making Safe and Spill-Free Motor Fuel Deliveries." For ordering information call EPA's toll-free RCRA/Superfund Hotline at 800 424-9346 (video costs about $60).

Closure

"Tank Closure Without Tears" and "What Do We Have Here?" Videos and companion booklets available ($20 to $45) from New England Interstate Water Pollution Control Commission, ATTN: VIDEOS, 84 Merrimac St., Boston, MA 02114

16

Quick Compliance Checklist

You should be in compliance with the "upgrade" requirements if you can check off the major items below for each of your *existing* UST systems by December 1998 (this list does not include leak detection requirements):

Spill protection provided by a catchment basin

Overfill protection provided by an automatic shutoff device, overfill alarm, or ball float valve

Corrosion protection for the tank provided by one of the following:

- Steel tank has corrosion-resistant coating AND cathodic protection
- Tank made of noncorrodible material (such as fiberglass)
- Steel tank clad with (or enclosed in) noncorrodible material
- Uncoated steel tank has cathodic protection system
- Uncoated steel tank has interior lined with noncorrodible material
- Uncoated steel tank has cathodic protection AND interior lined with noncorrodible material steel tank

Corrosion protection for piping provided by one of the following:

- Uncoated steel piping has cathodic protection
- Steel piping has a corrosion-resistant coating AND cathodic protection
- Piping made of (or enclosed in) noncorrodible material

You have decided not to upgrade your *existing* UST system with the items above, and you have properly closed the UST system. If you subsequently install a new UST system, the new installation meets all the regulatory requirements for installations after December 22, 1988.

Applicability and Summary of Regulated Underground Storage Tanks (N.J.S.A. 58:10A-21 et seq.)

HEATING OIL *(Petroleum products used for on-site consumption; #2, #4, and #6 fuel oil, kerosene, etc.)*

COMMERCIAL: (fuel oil dealers)
Any quantity stored for sale, distribution, processing or other commercial use must comply with all requirements of the State UST Law.

NON-RESIDENTIAL: (business, industry)
2,001 gallons or more for on-site consumptive use must comply with all requirements of the State UST Law. Tank facilities with capacities of 2,000 gallons or less are exempt.

MOTOR FUEL *(Petroleum products used in the operation of a motor: gasoline, diesel, aviation, kerosene, gasohol, etc.)*

COMMERCIAL:
Any quantity of motor fuel stored for commercial use must comply with all requirements of the State UST Law.

NON-COMMERCIAL:
Farm or residential tanks of 1,101 gallons or more storing motor fuel for non-commercial purposes must comply with all requirements of the State UST Law. Tank facilities with capacities of 1,100 gallons or less are exempt.

HAZARDOUS SUBSTANCES *(Non-petroleum substances as defined in the State UST Law)*

Any quantity stored must comply with all requirements of the State UST Law. The list of substances regulated is available from the Bureau.

HAZARDOUS WASTE *(Substances as defined in the State Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.)*

Any quantity stored must comply with all requirements of the State UST Law. Hazardous wastes include WASTE OIL. Many hazardous waste tanks are also regulated under the New Jersey Hazardous Waste Regulations (N.J.A.C. 7:26-1). For hazardous waste classification and technical assistance, contact the Bureau of Advisement and Manifest at (609)292-8341.

*All gallonage totals are aggregate for the substance category at the specific site. *NOTE: Owners or operators of FARM TANKS should contact the Bureau of Applicability and Compliance **

All gallonage figures are based upon the manufacturer's nominal tank capacity ONLY.